

REMARKS

Status Of The Claims

Claims 9, 11, 13, 14, 16 and 18 are pending in the application.

Claims 9, 11, 13, 14, 16 and 18 stand rejected.

The Amendment

Claims 9 and 14 have been amended to state that the enhanced flavoring composition consists essentially of the named components.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment.

The Rejection Under 35 U.S.C. 103(a)

The Examiner has finally rejected claims 14 and 18 under 35 U.S.C. 103(a) as being unpatentable over Record et al. (US 5,372,824) for the reasons set forth in the last office action. The Examiner has also finally rejected claims 9, 11, 13, 14, 16 and 18 under 35 U.S.C. 103(a) as being unpatentable over Cherukuri et al. (US 5,009,893) for the reasons set forth in the last office action. The Examiner states her position as follows:

Applicant argues that the prior art is directed to mint flavoring and that the prior art does not teach the claimed amounts of N-ethyl-p-menthane-3-carboxamide.

Record et al. disclose the combination of flavor and N-ethyl-p-menthane-3-carboxamide in amounts claimed for use in chewing gums (see entire patent, especially column 6, lines 20-32 and column 7, lines 26-34).

Cherukuri et al. disclose the combination of a flavor (e.g. mint and cherry) and N-ethyl-p-menthane-3-carboxamide in amounts claimed for use in chewing gums and confections (see entire patent, especially column 4, lines 16-39, column 6, lines 18-28, and Table V.)

Applicant does not exclude mint flavorings.

Enhancement would be obvious to that of the prior art as the same components are used.

The Examiner is respectfully requested to reconsider and withdraw the rejection of the claims as amended herein.

Applicants have amended claims 9 and 14, the independent claims in order that it is clear in the claim language that the claimed flavoring is to be limited to those flavorants listed in the Markush Group. Said Group does not encompass any mint flavorant. There is no prior art teaching to the specified combination of N-ethyl-p-menthane-3-carboxamide with flavorants absent the presence of a mint flavorant and/or

menthol in its capacity as a flavorant nor any prior art suggestion that said combination would be useful.

The Examiner has rejected claims 14 and 18 to chewing gums over Record et al. (Applicants understand that the remaining claims, including claim 16, would be allowable over Record et al.) Record et al. (US 5,372,824) teach mint-flavored chewing gums. There are no chewing gum examples (in particular, comparative examples) to a product not containing a mint flavorant. The amounts in which the cooling agents are used in the Record et al. invention relative to the menthol flavor are distinctly higher than that taught and claimed by applicants. Applicants claim a product wherein the enhanced flavorant has N-ethyl-p-menthane-3-carboxamide present in an amount which is from about 0.04% to 2.2% by weight of the flavor used. Record et al. teach examples, (Flavor No. 2 and Example 3A) wherein N-ethyl-p-menthane-3-carboxamide is present at 3.32% and 2.35% respectively of the total mint flavor. This usage range of N-ethyl-p-menthane-3-carboxamide as a cooling agent when combined with menthol does not at all suggest the claimed gum products wherein N-ethyl-p-menthane-3-carboxamide is present at 0.04% to 2.2% for enhancement of a non-mint (non-cooling) flavor.

The Examiner holds that Record et al. "disclose the combination of flavor and N-ethyl-p-menthane-3-carboxamide in amounts claimed for use in chewing gums (see entire patent, especially column 6, lines 20-32 and column 7, lines 26-34)." As pointed out above the only disclosure in Record et al. is of mint flavored combinations. Applicants' claimed invention excludes these cooling flavors. There is no disclosure of non-mint in Record et al. Nor is there any suggestion to use the Record et al. teaching for non-mint products since the aim, or goal, of Record et al. was to correct a problem that can only occur in mint flavored products.

The sections referred to by the Examiner provide the following teachings:

Column 6, lines 20-32: "A variety of flavoring agents can be used in combination with the mint flavor of the present invention. The flavor, which may only include the mint flavor, can be used in amounts of approximately 0.1 to about 15 weight percent of the gum, and preferably, 0.3 to 5%. Flavoring agents may include essential oils, synthetic flavors or mixtures thereof including, but not limited to, oils derived from plants and fruits such as citrus oils, fruit essences, peppermint oil, spearmint oil, other mint oils, clove oil, oil of wintergreen, anise and the like. Artificial flavoring agents and components may also be used. Natural and artificial flavoring agents may be combined in any sensorially acceptable fashion."

Column 7, lines 26-34: "If desired, a cooling agent can be added to the mint oil that has been reduced with respect to its 1-menthol content. Examples of cooling agents include menthyl lactate, menthone glycerol ketal, 3-1-menthoxypropane-1,2,diol, and N-ethyl-P-menthane-3-carboxamide. The cooling agent can comprise, for example, 0.1% to 5.0% by weight of the reduced mint oil."

It is clear from these sections that, firstly, the flavor always includes mint since Record et al. state that “the flavor ... may only include the mint flavor”. Secondly, these sections only serve to point out that the Record et al. teaching is not primarily drawn to a product which always includes a cooling agent since as Record et al. state “a cooling agent can be added”. A teaching of the use of a cooling agent with the menthol-reduced peppermint oil is an option, one used to put back some of the lost cooling effect.

To support a prima facie obviousness rejection of the claimed invention one must consider the prior art teaching as a whole, and what it would suggest to one skilled in the art as a whole. Any suggestion of a combination of N-ethyl-p-menthane-3-carboxamide with non-mint flavors to enhance those flavors is not there. One only learns of this possibility, and the amount of the combination to use in confectioneries or in chewing gums, from applicants’ teaching.

The Examiner has rejected all of the claims, claims 9, 11, 13, 14, 16 and 18, over Cherukuri et al. (US 5,009,893). Cherukuri et al. teach combinations of menthol and carboxamides to be utilized as cooling agents. While Cherukuri et al. do not state that the invention only concerned the improvement of mint flavors as Record et al. did, Cherukuri et al. do state that the problem that they were correcting was found only in mint flavor. No other flavoring agents are taught by Cherukuri et al. The only example which contains a flavor agent absent menthol is a comparative example in which no cooling effect was found in a cherry flavored candy absent the presence of menthol. (No similar comparative example is given for chewing gums.)

The Examiner holds that “Cherukuri et al. disclose the combination of a flavor (e.g. mint and cherry) and N-ethyl-p-menthane-3-carboxamide in amounts claimed for use in chewing gums and confections (see entire patent, especially column 4, lines 16-39, column 6, lines 18-28, and Table V.)” As applicants have pointed out in the prior replies the claimed invention falls outside the teachings of Cherukuri et al.

The sections referred to by the Examiner provide the following.:

Column 4, lines 16-39: “A combination of these two ingredients when used in specific amounts overcomes the deficiencies of each component. The cooling composition of the present invention contains menthol in amounts of about 5 to about 70% by weight and preferably in amounts of about 20 to about 60% by weight of the cooling composition. The N-substituted-p-menthane carboxamide compound is used in amounts of about 30 to about 95% by weight and preferably in amounts of about 40 to about 80% by weight of the cooling composition. It is critical that the amount of the N-substituted-p-menthane carboxamide compound not be below 30% by weight of the combination, since such low amounts fail to form products that exhibit long-lasting cooling which are not bitter. In contrast, amounts above about 95% fail to form products that exhibit an initial cooling effect.”

Column 6, lines 18-28: "The chewing gum composition may also include conventional additives such as flavoring agents; coloring agents such as titanium dioxide; emulsifiers such as lecithin and glyceryl monostearate; and additional fillers such as aluminum hydroxide, alumina, aluminum silicates, calcium carbonate, and talc. Combinations of these conventional additives are contemplated. These fillers may also be used in the gum base in various amounts. Preferably the amount of fillers when used will vary from about 4% to about 45% by weight of the final chewing gum composition."

Table V: As far as is pertinent here Table V provides a comparative example which contains a cooling agent, Cooling Compound 2470, with a flavor agent absent menthol. That example, #3, combined the cooling compound with a cherry flavor in a candy composition. The amount of the combined flavorants is 1.9% of the candy composition. No cooling effect was found in the cherry flavored candy absent the presence of menthol.

It is clear from the first cite that Cherukuri et al. conveyed to one skilled in the art a teaching which is applicable only to menthol and the cooling agent and secondly that the combination had a fairly high cooling agent content. This teaching in fact supports the applicants' position. Particularly noteworthy is the statement that "It is critical that the amount of the N-substituted-p-menthane carboxamide compound not be below 30% by weight of the combination, since such low amounts fail to form products that exhibit long-lasting cooling which are not bitter." Mint flavored chewing gums taught by Cherukuri et al. contain 4% or greater N-ethyl-p-menthane-3-carboxamide of the combination with menthol, significantly higher than applicants.

The second cite merely conveys conventional ingredients which may be added to chewing gums.

At Table V Cherukuri et al. teach a confectionery composition containing a cherry flavor. As stated above, the amount of the combined flavorants in Example V#3 in which no menthol is used is 1.9% of the candy composition. (In example V#4, which combines menthol with the cherry, the amount of flavorant used in the candy for effect increases to 2.4% of the candy composition). This usage range does not suggest the claimed confectionery composition wherein the enhanced flavorant is found effective at about 0.10% to 1.0% by weight of the confectionery composition. Just as pertinent to a discussion of what the teaching conveys to one skilled in the art, i.e., what might motivate one to take the teaching and modify it, as one would need to do to arrive at applicants invention, is the stated fact that this was a non-useful combination, i.e., it did nothing for the flavor.

In view of the above discussions and the amendments made herein, the Examiner is respectfully requested to withdraw the rejection of claims 14, and 18, as amended, under 35 U.S.C. 103(a) as obvious over Record et al. and the rejection of claims 9, 11, 13, 14, 16, and 18, as amended, under 35 U.S.C. 103(a) as obvious over Cherukuri et al.

Conclusion

In view of the above applicants believe all of the claims in this application are in condition for allowance. If any questions remain, the resolution of which would be advanced by conference (telephonic or personal) with applicants' agent, the Examiner is invited to contact said agent at the telephone or the fax number noted below.

Respectfully submitted,
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Date: May 1, 2002

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Attachment: VERSION WITH MARKINGS TO SHOW CHANGES MADE

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IN THE CLAIMS

Claim 9 (amended)

A confectionery composition containing a flavoring effective amount of an enhanced flavoring composition said flavoring composition [comprising] consisting essentially of

(a) [at least] one or more flavoring agent selected from the group consisting of lemon, orange, lime, apricot, grapefruit, banana, cherry, apple, pineapple, grape, strawberry, tutti frutti, fruit punch, cinnamon, anise, coriander, eucalyptus, ginseng, fennel, honey, caramel, toffee, molasses, nutmeg, pepper, cinnamon, caramon, ginger and clove, and,

(b) an amount of N-ethyl-p-menthane-3-carboxamide effective to enhance said flavoring agent wherein said N-ethyl-p-menthane-3-carboxamide is present at about 0.04 to about 2.2 % by weight of said enhanced flavoring composition, and; wherein said enhanced flavoring composition is present at about 0.10% to about 1.0% by weight of said confectionery composition.

Claim 14 (amended)

A chewing gum containing a flavoring effective amount of an enhanced flavoring composition said flavoring composition [comprising] consisting essentially of

(a) [at least] one or more flavoring agent selected from the group consisting of lemon, orange, lime, apricot, grapefruit, banana, cherry, apple, pineapple, grape, strawberry, tutti frutti, fruit punch, cinnamon, anise, coriander, eucalyptus, ginseng, fennel, honey, caramel, toffee, molasses, nutmeg, pepper, cinnamon, caramon, ginger and clove, and,

(b) an amount of N-ethyl-p-menthane-3-carboxamide effective to enhance said flavoring agent wherein said N-ethyl-p-menthane-3-carboxamide is present at about 0.04 to about 2.2 % by weight of said enhanced flavoring composition, and; wherein said enhanced flavoring composition is present at about 0.8% to about 3.5%. by weight of said chewing gum.